

Dairy Breeds

Grades: 4- 6

Subjects: Social Studies,
Communication Arts, Art

Approximate Time: 90 minutes

Standards: Social Studies 1, 3, 4; Art 1,2,3,4,6;
Communication Arts 5.

Objectives: Students will

- Differentiate between different dairy breeds.
- Be able to place on a world map the place of origin of the breeds.
- Work as part of a group to research unique aspects of each breed producing an educational display.

Materials Needed:

- Montana dairy facts brochure
- World map
- Video – Dairy Cows: Keeping Wisconsin Green
- Worksheet Cowabunga Moos News and Cowabunga (All About Breeds)
- Research resources/materials
- Art materials for displays
- Montana Commodity Cards

Keywords:

- Holstein
- Brown Swiss
- Guernsey
- Ayrshire
- Jersey

Brief Description: Students will be able to identify a dairy cow, its specific breed, where it came from and what is unique about the breed.

Lesson:

1. Discuss with students, using pictures and dairy facts brochure, background about dairy cows.
2. Show video: Dairy Cows: Keeping Wisconsin Green (25 minutes)
3. Divide Students into 5 groups assigning one of the 5 main breeds to each group for research and presentation purposes.
4. Allow time for group research and educational display and presentations to the class.

Assessment:

Students will follow – up the lesson with the (All About Breeds) graphic organizer which they will do together in their groups and then check work with the class as a whole.

Answer Key:

The Montana Dairy Facts brochure can be ordered in advance from: Westerndairyassociation.org
The Cowabunga (All About Breeds) worksheet is from the California Foundation for Agriculture in the Classroom lessons; Milk Matters! Discovering Dairy
The Video; Dairy Cows: Keeping Wisconsin Green can be ordered from: www.wisdairy.com/video
Montana Commodity Cards: Order from Lbrenneman@mt.gov

Thank you to the Western Dairy Association, the California Foundation for Agriculture in the classroom and Fun Faces of Wisconsin Agriculture for materials used for this lesson.

Cowabunga! (All About Breeds)

50 CENTS



MOOS NEWS Jobs Wanted



5TH EDITION

Nessie Will Produce for You!

Nessie is a Holstein cow originating from the Netherlands, a country in northern Europe. Nessie weighs 1,500 pounds and is one of the largest breeds of dairy cattle. She is known around town as a real classy gal, partly because of her simple, black and white wardrobe. She wears all white, with large black spots. Unfortunately, cows don't get to change their clothes; it's what they're born with. Differences in coloring help us identify breeds. Nessie's great-great-great grandmother entered America by ship in 1852, arriving in Boston, Massachusetts. Holsteins make more milk than any other breed. Nessie is no exception and produces about 10 gallons of milk per day.

A Sweet Swiss

If you travel to Switzerland, a mountainous country in Europe popular for skiing and cheese, you are sure to meet Heidi, a Brown Swiss dairy cow. She enjoys grazing on grass, but she sure does have a sweet tooth!! She produces pure white milk high in lactose, also known as milk sugar. Her milk is perfect for making cheese. Heidi weighs 1,500 pounds and

is very athletic. Brown Swiss cattle are famous for strong feet and legs, and for their brown coloring. Heidi's ancestors came to America in 1869, arriving in Massachusetts. Heidi, like her Brown Swiss relatives, lives and works well in both hot and cold climates.

Strike it Rich with a Golden Guernsey!

Gertrude is a Guernsey cow from Guernsey, a very small island nation off the northern coast of France. Gertrude's family came to the Americas by boat in 1840. They entered through a port in New York. Guernseys like Gertrude are famous for producing milk that is golden in color. Everything about Gertrude is golden, including her gold coat with white patches. Gertrude is a medium-sized dairy cow, weighing 1,150 pounds. She will be making milk for you for many years, as her breed is well known for living longer than any other breed.

An Unbelievable Udder

Red and white speckled Adie

the Ayrshire is a dairy cow from Scotland, but she can't play the bagpipes. She can, however, produce milk used for high quality butter and cheese. Adie and her relatives weigh about 1,200 pounds each. They are considered medium-sized cows famous for having healthy udders. Ayrshires entered America in 1822. They arrived in Connecticut by ship. Adie's ancestors thrived in the rocky hills and cold weather, similar to their home in Scotland.

Little in Size, but BIG in Milk

If you travel to the small island of Jersey off the coast of France, you will find relatives of Jenny the Jersey. Jenny only weighs 900 pounds and is small compared to other breeds, but she still produces high quantities of milk for her petite size. Many people call Jersey cows, like Jenny, the "prettiest" breed, as they are small and slim through their head and shoulders and have an attractive honey-brown coat color. Jersey cows were first introduced to America in 1850, and continue to be the second most common breed in California.

Cowabunga! (All About Breeds)

1. Complete the following graphic organizer. Add the information for the dairy breed assigned to you first, then work together with your group to complete the entire organizer.

Breed	Country of Origin	Physical Description	Weight	Other Unique Characteristics
Holstein				
Brown Swiss				
Ayrshire				
Guernsey				
Jersey				

2. Work as a group to complete the following questions. Imagine for a moment that you are a California dairy farmer. Which breed would you buy for...

Making ice cream?

A beautiful herd?

Making cheese?

Healthy udders?

A very healthy herd?

Small cows?

Making "golden" milk?

Making butter?

Making a lot of milk?

Running a marathon?

Living in Antarctica?

Living a long time?

Cowabunga! (All About Breeds)

Answer Sheet

1. Complete the following graphic organizer. Add the information for the dairy breed assigned to you first, then work together with your group to complete the entire organizer.

Breed	Country of Origin	Physical Description	Weight	Other Unique Characteristics
Holstein	<i>The Netherlands</i>	<i>All white with black spots, largest breed</i>	<i>1,500 lbs</i>	<i>Makes more milk than other breeds, 10 gallons/day</i>
Brown Swiss	<i>Switzerland</i>	<i>Athletic, strong feet and legs, brown</i>	<i>1,500 lbs</i>	<i>Milk high in lactose, used for cheese, likes hot and cold climates</i>
Ayrshire	<i>Scotland</i>	<i>Red and white</i>	<i>1,200 lbs</i>	<i>Milk used for butter and cheese, healthy udders, withstanding cold weather</i>
Guernsey	<i>Guernsey</i>	<i>Gold and white</i>	<i>1,150 lbs</i>	<i>Makes golden milk, lives a long time</i>
Jersey	<i>Jersey</i>	<i>Honey-brown, small, "pretty"</i>	<i>900 lbs</i>	<i>Second most common, high quantity of milk</i>

2. Work as a group to complete the following questions. Imagine for a moment that you are a California dairy farmer. Which breed would you buy for...

Brown Swiss

Making ice cream?

Jersey

A beautiful herd?

Brown Swiss, Ayrshire

Making cheese?

Ayrshire

Healthy udders?

Ayrshire, Guernsey

A very healthy herd?

Jersey

Small cows?

Guernsey

Making "golden" milk?

Ayrshire

Making butter?

Holstein, Jersey

Making a lot of milk?

Brown Swiss

Running a marathon?

Brown Swiss, Ayrshire

Living in Antarctica?

Guernsey

Living a long time?

28 Butter has the same number of calories (39 per teaspoon) as margarine - without the high level of trans fats.

29 Because of their high milk production, Holsteins are the most common breed of dairy cow. The average Holstein weighs 1,400 pounds.

30 Much of the milk delivered today was milked from cows just two days ago.

3/ Every tank load of milk is strictly tested for antibiotics. If a tanker tests positive, the milk is disposed of immediately, never reaching the public.

32 Lactose intolerance symptoms may lessen if dairy foods are eaten regularly. Try 1/2 cup white or chocolate milk, aged cheeses or yogurt with meals.

33 Milk is transported from farm to dairy plant in an insulated tanker truck, similar to a giant thermos.

34 Chocolate milk has been around since 1919. Newer flavors include banana, strawberry and mocha latté.

35 Milk is the leading source of vitamin B₂ for vegetarians. Dairy foods supply 22 percent of the nation's vitamin B₂, essential for nerve and blood cell health and for making DNA.

36 On average, today's dairy cow yields nearly 104 glasses of milk a day, more than doubling production of her counterpart 40 years ago. This varies with genetics, feeding practices and weather.

37 The 3-A-Day logo reminds consumers of the need for three daily servings of milk, yogurt or cheese.

38 Cows have 32 permanent teeth, just like humans. They also have an acute sense of smell — detecting aromas up to six miles away.

your 206 bones
say, "feed me,"
every day



great ways to
boost your
bones

* The Dietary Guidelines for Americans recommend people consume three servings of fat-free or low-fat milk or milk products

every day as part of a healthy diet, and lactose-free milk or yogurt for individuals who are lactose intolerant. Here are some easy ideas:

- Instead of water, stir a cup of milk into hot cereal or condensed milk.

- Turn your coffee into a latté by mixing a shot of espresso or strong coffee with a cup of milk.

- Toss an ounce of shredded cheese (three to four cheese cubes) into a salad.

- Blend a cup of yogurt with your favorite fruit and ice to make a smoothie

- Mix a cup of yogurt with seasoning for a veggie dip or sandwich spread.

Check out the calcium-rich recipes at web site:

3aday.org • ilovecheese.com

For information on modern dairy farming practices visit: www.dairyfarmingtoday.org

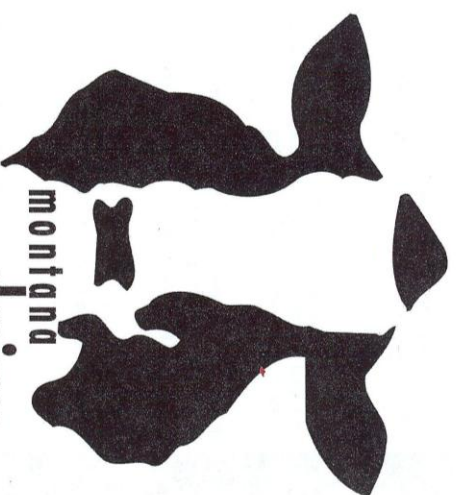


12000 North Washington Street, Suite 175

Thornton, CO 80241

07/08

www.westerdairyassociation.org



montana dairy facts

the Latin word for cow
is *bos* — which is why
so many cows are called bossy

our spots are like fingerprints — no two cows have the same spot pattern

3 servings a day.
4 for teens!

moooooooooooo

**Brought to you by
Western Dairy Association**

- 1 About 75 percent of the calcium in the United States' food supply comes from dairy foods.
- 2 On average, a dairy cow eats 90 pounds of food and drinks 50 gallons of water in the 6 1/2 hours she spends eating each day.
- 3 Montana dairy cows produced an average 2,151 gallons of milk per cow in 2007, collectively producing 38.7 million gallons
- 4 Approximately 18,000 dairy cows are being milked on Montana's 80 dairy farms.
- 5 You never outgrow your need for calcium-rich foods.
CALCIUM GUIDELINES (ADEQUATE INTAKE)

age	mg/day	GOOD CALCIUM SOURCES
1-3	500	milk, 1 cup 300 mg
4-8	800	Cheddar cheese, 1.5 oz 300 mg
9-18	1,300	fruit flavored yogurt, 8 oz 350 mg
19-50	1,000	calc. latte, 12 oz 400 mg
51+	1,200	
- 6 Milk and dairy products undergo numerous safety, quality and sanitation checks, making them among the most highly regulated and safest foods.
- 7 California produces more milk than any other state, followed by Wisconsin and New York.
- 8 Ninety-nine percent of all dairy farms are family-owned. Herds are larger, with the average farm milking 155 cows, more than double the number 15 years ago.
- 9 People eat more ice cream on Sunday than on any other day of the week. Vanilla is the most popular flavor, followed by chocolate.

- 10 Lower blood pressure and other risk factors for heart disease and stroke with a diet rich in low fat dairy products, fruits and vegetables.
- 11 Rich in nutrients, milk and other dairy foods contribute less than 10 percent of the calories in the American diet.
- 12 UHT (ultra-high temperature) dairy products, such as the small cups of half & half restaurants serve, keep three to six months, unrefrigerated.
- 13 One gallon of milk weighs 8.6 pounds.
- 14 Dairying is Montana's fifth largest agricultural business. In 2007, farm cash receipts totaled \$41.8 million dollars.
- 15 Just ate spicy food? Milk cools your mouth. Casein, a milk protein, washes away capsaicin, the chemical responsible for the heat.
- 16 Most children with milk allergy (sensitivity to milk protein) outgrow that condition by age 2.
- 17 Fat-free, low-fat, reduced-fat or whole, all milks contain approximately the same amount of calcium and other essential nutrients.
- 18 Vitamin D is crucial to bone growth and development because it helps the body absorb calcium. Milk is one of the few dietary sources of Vitamin D.

- 19 There are more than 2,000 known varieties of cheese in the world. American-made cow's milk cheeses are versatile and easy to use.
- 20 Nine out of 10 women don't consume enough calcium. A low intake of calcium is associated with the bone disease osteoporosis.
- 21 The American Academy of Pediatrics urges kids to choose milk, yogurt and cheese for the calcium they need.
- 22 If your diet is low in calcium, your body will steal it from the only source it has: your bones.
- 23 Milk should be stored cold between 35 degrees F and 40 degrees F.
- 24 Milk is pasteurized at 161° F for 15 seconds. Pasteurization retains nutrients but destroys bacteria, which makes it safer than raw milk.
- 25 Two million dairy farms dotted the face of the U.S. 40 years ago. Fifteen years ago, there were 131,500. Today, 59,000 herds supply a growing populace with dairy foods.
- 26 Scientific research suggests that cheese may help prevent tooth decay by blocking acid formation.
- 27 Montana's dairy farmers are dedicated to the care and well-being of their animals. They provide a nutritious diet, proper medical care and comfortable living conditions. Learn more at www.dairyfarmingtoday.org

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